

ABSTRACT

An object is to provide an electroless copper plating solution that realizes uniform plating at lower temperatures, when the electroless copper plating is performed on a semiconductor wafer or other such mirror surface on which a plating reaction hardly occurs. An electroless copper plating solution, wherein, along with a first reducing agent, hypophosphorous acid or a hypophosphite is used as a second reducing agent, and a stabilizer to inhibit copper deposition is further used at the same time. Examples of the first reducing agent include formalin and glyoxylic acid, while examples of the hypophosphite include sodium hypophosphite, potassium hypophosphite, and ammonium hypophosphite. Examples of the stabilizer to inhibit copper deposition include 2,2'-bipyridyl, imidazole, nicotinic acid, thiourea, 2-mercaptobenzothiazole, sodium cyanide, and thioglycolic acid.